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Friday's Feature

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Mistletoe can damage a tree

Hanging mistletoe over a doorway during the Christmas holidays has been a tradition for centuries. Most of us know mistletoe as the sprig of green leaves and white berries at Christmastime that bestows the right to kiss the person under it. But mistletoe is a real plant that grows as a semi-parasite on trees.

Mistletoe is not like typical plants which obtain support, water and nutrients from the soil in which they grow. Mistletoe is a parasite on other plants. It prefers to infest certain species of trees. Along the Gulf Coast, it is found mostly on laurel oak and water oak, but can be found on other trees.

Mistletoe is spread mainly by birds. Its white berry is part of many birds' diet. The seeds are covered with a sticky substance and as birds visit other trees the berries are deposited on limbs in their droppings. The gelatinous coating acts like a glue to bind the seed to the limb until it germinates. Once the seed is stuck or ledged on a tree branch, growth of a new plant can begin. In most cases, the heaviest infestation occurs on larger or older trees because birds prefer to perch in the tops of taller trees.

The seed germinates in much the same way that typical plants do, but the similarity ends there. Mistletoe has a root-like structure (called a haustoria) that penetrates through young, thin bark into the water and nutrient carrying tissue of its host.

Mistletoe removes water, minerals and nutrients from the host and so starves and sometimes kills the portion of the branch lying beyond the point of infection. Healthy trees can tolerate a few mistletoe branch infections, but individual branches may be weakened or sometimes killed. Heavily infested trees may be reduced in vigor, stunted, or even killed, especially if they are stressed by other problems such as drought or disease.

Mistletoe can be very difficult to control because a portion of it grows into its host tree's tissue. Simply cutting the mistletoe out of an infested tree each winter is not ideal but is better than doing nothing at all. Even though the parasite will grow back, spread is reduced because most mistletoe must be several years old before it can bloom and produce seed.

The most effective way to control mistletoe and prevent its spread is to prune out infected branches, if possible, as soon as the parasite appears. Using thinning-type pruning cuts, remove infected branches at their point of



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origin or back to large lateral branches. Infected branches need to be cut at least one foot below the point of mistletoe attachment in order to completely remove embedded haustoria. Done properly, limb removal for mistletoe control can maintain or even improve tree structure.

Severe heading (topping) has been used to remove heavy tree infestations; however, it is not recommended because such pruning weakens a tree's structure and destroys its natural form. In some cases it is best to remove severely infested trees entirely because they are usually a source of mistletoe seed.

Locally, mistletoe infestations are found to be most severe on stressed trees and in areas where one species seems to dominate. Because mistletoe can be difficult to control, it's best to keep mistletoe from being a problem in your landscape.

Think diversity when planting trees. Avoid planting too many of the same species in the same general area. Protect established trees by limiting activities within the root zone. Filling, grading, ditching and compaction can severely stress trees and make them susceptible to parasites. And lastly, take care of the problem early. Remove the first clump of mistletoe seen, branch and all. This might break the cycle in your area and prevent problems later.

Theresa Friday is the Residential Horticulture Extension Agent for Santa Rosa County. The use of trade names, if used in this article, is solely for the purpose of providing specific information. It is not a guarantee, warranty, or endorsement of the product name(s) and does not signify that they are approved to the exclusion of others.